

transgenic plant body, said physiologically active protein being present endogenously in humans or mammals and being a substance responsible for the maintenance or the modulation of physiological functions in said humans or mammals.

--12(New). The transgenic plant of claim 11, wherein said physiologically active protein is one or more mammalian cytokines.

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--13(New). The transgenic plant of claim 12, wherein the one or more mammalian cytokines are selected from the group consisting of interferons, interleukins, hematopoietic factors, and growth factors, wherein said growth factors include nerve growth factor, epidermal growth factor, platelet derived growth factor, transforming growth factor  $\alpha$ , growth factor  $\beta$ , growth hormone, insulin and steroids.

--14(New). The transgenic plant of claim 11, wherein the mammalian source is bovine, porcine, mouse, or rat.

--15(New). The transgenic plant of claim 11, which is edible without cooking or heating.

--16(New). The transgenic plant of claim 11, wherein said plant body is a plant of a family selected from the group consisting of *Solanaceae*, *Apiaceae*, *Asteraceae*, *Brassicaceae*, *Cucurbitaceae*, *Rosaceae*, *Vitaceae*, *Ericaceae*, *Caricaceae*, *Fabaceae*, *Juglandaceae*, and *Chenopodiaceae*.

--17(New). The transgenic plant of claim 11, to which trehalose has been added.

--18(New). An isolated tissue of the transgenic plant of claim 11, which is selected from the group consisting of leaf, stem, root, fruit, peel, bud, petal, and a combination thereof.

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--19(New). The isolated tissue of claim 18, to which trehalose has been added.

--20(New). A processed form of the transgenic plant of claim 11, which results from the transgenic plant of claim 11 being subjected to a process comprising one or more steps of cutting, peeling, pulverizing, squeezing, or extracting.

--21(New). The processed form of claim 20, to which trehalose has been added.

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--22(New). A method for treating humans or mammals suffering from diseases susceptible to a physiologically active protein, comprising administering a physiologically active protein to humans or mammals in need thereof by ingestion of a transgenic plant, an isolated tissue thereof or a processed form thereof comprising a physiologically active protein of a human or mammalian source, said transgenic plant being obtainable by (i) introducing a DNA sequence encoding said physiologically active protein into a plant protoplast, plant cell, plant tissue, or a plant body; (ii) growing the

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transformed plant protoplast, cell or tissue into said transgenic plant body while allowing expression of said DNA sequence within the transgenic plant body in an amount effective when taken orally to treat humans or mammals suffering from diseases susceptible to said physiologically active protein; and (iii) harvesting the transgenic plant body, said physiologically active protein being present endogenously in humans or mammals and being a substance responsible for the maintenance or the modulation of physiological functions in said humans or mammals.

--23(New). The method of claim 22, wherein said physiologically active protein is one or more mammalian cytokines.

--24(New). The method of claim 23, wherein the one or more mammalian cytokines are selected from the group consisting of interferons, interleukins, hematopoietic factors, and growth factors, wherein said growth factors include nerve growth factor, epidermal growth factor, platelet derived growth factor, transforming growth factor- $\alpha$  growth factor- $\beta$ , growth hormone, insulin, and steroids.

--25(New). The method of claim 23, wherein the mammalian source is bovine, porcine, mouse, or rat.

--26(New). The method of claim 22, wherein said transgenic plant is edible without cooking or heating.

--27(New). The method of claim 22, wherein said plant body is a plant of a family selected from the group consisting of *Solanaceae*, *Apiaceae*, *Asteraceae*, *Brassicaceae*, *Cucurbitaceae*, *Rosaceae*, *Vitaceae*, *Ericaceae*, *Caricaceae*, *Fabaceae*, *Juglandaceae*, and *Chenopodiaceae*.

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--28(New). The method of claim 22, wherein said isolated tissue thereof is selected from the group consisting of leaf, stem, root, fruit, peel, bud, petal, and a combination thereof.

--29(New). The method of claim 22, wherein said processed form thereof is one which results from the transgenic plant being subjected to a process comprising one or more steps of cutting, peeling, pulverizing, squeezing, or extracting.

--30(New). The method of claim 22, wherein trehalose has been added to said transgenic plant, isolated tissue thereof, or processed form thereof.--

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